

## **CLAIMS OBJECTIONS**

Claims 1, 2, 95, 129, 133, and 137 were objected to by the Examiner for informalities.

In Claim 1, the phrase “diversity capability” in lines 31-32 and 35-36 has been replaced by “diversity capability means”, as suggested by the Examiner.

This was also done for Claim 2.

This required alteration of dependent claims to echo the same text, which was then done; specifically, claim 32 (of those objected to) had the same correction made. (This was done in other claims, but they had other corrections and are discussed in ‘Claims Rejections’, below.)

In Claim 95, the typo was corrected and “concering” has been replaced by “concerning”.

In Claims 123 and 133, the extra period was removed from the end of the claims.

This same correction was made to Claims 150 and 152; though not requested, the Examiner’s intent was clear.

In Claim 137, the missing period at the end of the claim was added, as per the Examiner’s suggestion.

In Claim 40, the missing “i” was replaced so the word “using” is spelled correctly.

## **CLAIMS CANCELLATION**

Claims 180 and 181, being duplicates respectively of Claims 178 and 179, are cancelled.

## **CLAIMS REJECTIONS**

### **– Uncertainty**

Claims 1 and 2 were rejected as the OA stated it was unclear whether “diversity capability” was the same as “diversity capability means”. These were meant to be the same and the claims have been so corrected.

A similar correction has been made for Claims 19, 20, 41, and 108.

Claim 55 was rejected due to the undefined nature of the text “EQ. 40” and “EQ. 41”. For like reasons, Claims 56, 62, 64, 67, 69, 71, 72, 73, 74, 75, 78, 84, 91, 108, were rejected.

In each of the above claims (55, 56, 62, 64, 67, 69, 71, 72, 73, 74, 75, 78, 84, 91, 108), the short-hand phrase for “equation N” (where N is a number identifying that equation in the Specification) has been removed from the claim, and replaced by the text from the Specification. Applicant believes that this resolves the definitional uncertainty.

This was also done for Claim 109; though not specifically asked for in the OA, in the effort to meet the spirit and intent of the concerns raised therein.

Claim 57 was rejected due to the undefined nature of the text “Figure 37”. This has been removed from the claim, and replaced by text from the Specification (modified to the format of a claim) concerning that Figure, stating the specifics desired. Applicant believes that this resolves the definitional uncertainty.

Claim 61 was rejected on the grounds that “ $p_l(q)$ ” was undefined. However, this is defined within the claim, specifically as “the SU (user 1 node) transmit power for link number q”. Applicant believes that this resolves the definitional uncertainty.

Claim 75 -- though previously unspotted, the missing “i” has been added to correctly spell the word “eliminates”.

Claim 109 – though previously unspotted, the missing ‘t’ has been added to correctly spell the word “spotting”.

Claim 82 was rejected on the grounds that “Figure 32A and 32B” was undefined. Inasmuch as these were meant to be illustrative, not limiting, references, they have been eliminated. Applicant believes that this resolves the definitional uncertainty.

Claim 107 was rejected on the grounds that “similarly modified” was unclear. This phrase has been replaced so this has been defined. Applicant believes that this resolves the definitional uncertainty.

Claim 108 was rejected due to uncertainty about the use of “diversity capability” and “D21” and “EQ. 49”. All of these have been clarified. Applicant believes that this resolves the definitional uncertainty.

Claim 112 was rejected due to “beta” being undefined. “Beta” was actually defined in the grandparent claim, Claim 61, as “a capacity objective for a particular Node 2...”; and is also defined in the Specification (in far more detail) at p. 132. Applicant believes that this resolves the definitional uncertainty.

Claims 137-9 and 141-143 were objected to as being dependent upon a later claim; these errors have been corrected.

#### **– Insufficient Antecedent Basis**

Claims 1 and 2 were rejected for this ground. Both Claim 1 and 2 have had “waves” replaced by the phrase “signals” when following the words “analog radio”, as had been discussed and approved before.

This was followed by changing the same phrase in the dependent claims where it was found (Claims 23-25).

Claims 1, 2, 3-7, 12, 18, 56, 61, and 62 were rejected for this ground, for having the phrase “diversity channels”. All have had the word “channels” replaced by “capability means”, so the phrase reads “diversity capability means”, correcting this.

Claims 12 and 16 were rejected for this ground for a phrase that was meant to be part of an equation. The equation has been corrected in both claims.

Claim 13 was rejected for this ground, for having the phrase “every diversity channel”. It has had the word “channel” replaced by “capability means”, so the phrase reads “every diversity capability means”, correcting this.

Claim 18 was corrected, as stated above.

Claims 21, 22, 26-31, 33, 36, 38-40, 44-50, and 59 were rejected for this ground, for having the phrase “diversity channels”. All have had the word “channels” replaced by “capability means”, so the phrase reads “diversity capability means”, correcting this.

Claims 51, 55, 108 were also corrected for the same problem.

Claim 41, as with 12 and 16, were rejected for insufficient antecedent basis for the phrase “ $g_1(q)$ ”; as with 12 and 16, this was meant to be part of an equation and the equation has been corrected.

Claims 65 and 66 were rejected for insufficient antecedent basis for the limitation “the network B”. The antecedent basis for this, in Claim 61, has been coordinated with these, so the claims have been corrected.

Claim 67 was rejected for insufficient antecedent basis for the phrase “the reciprocity equation”. The equation – as it is stated in the Specification – has been specifically stated in the claim and this claim has been corrected.

Claim 75 has had the incorrect “the” replaced with the correct “a”.

Claim 101, and Claim 105, as with many preceding claims, were rejected for this ground, for having the phrase “diversity channels”. Both have had the word “channels” replaced by “capability means”, so the phrase reads “diversity capability means”, correcting this.

Claims 103 and 104 were rejected for insufficient antecedent basis for the phrase “said first subset”. These claims are dependent upon Claim 101, where the term “at least a first subset” occurs in the fifth line of the claim. It is believed that this resolves the concern.

Claim 108 also has had “waves” replaced by the phrase “signals” when following the words “analog radio”, as had been discussed and approved before. It is believed that this corrects the claim.

Claim 110 was rejected for insufficient antecedent for the verbal “optimizing for channel capacity”. The claim has been restated to resolve this concern.

Claim 113 was rejected for insufficient antecedent for two reasons: (1) the use of “diversity channels” and (2) the use of “ $g_1(q)$ ”. The former was corrected with the replacement of “diversity channels” with the phrase “means for diversity transmission and reception”, which occurs earlier (at the 11<sup>th</sup> line) in the claim; and the latter was corrected by having the equation corrected. It is believed that this corrects the claim.

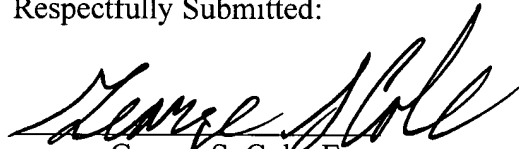
It is believed that all of the above alterations and corrections meet the concerns discussed and render those independent claims that had been rejected allowable, thereby avoiding any need to rewrite claims 8-11, 14-15, 17, 32, 34-35, 37, 43-43, 51-54, 58, 60, 63, 68, 70, 76-77, 79-81, 83, 85-90, 92-100, 106, 109, 111, 114-136, 140, and 144-179, and 182-183, into an independent form.

If the Examiner has any questions or wishes to discuss this matter he is urged to contact the Applicant's attorney, George S. Cole, Esq., using the phone, fax, or email below.

A claims listing with the status of each claim, with the claims in ascending order, and with the text of the claim, has been appended to this Response. This listing of claims will replace all prior versions, and listings, of claims in the application.

The Applicant believes that these claims are now all in presently allowable, correct, and proper form, and respectfully asks that a timely Notice of Allowance be issued in this case.

Respectfully Submitted:



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